CHAPTER 1

Total Energy Use

There are two common ways to account for energy use:

resource energy consumption and

end-use energy consumption.

End use refers to the energy content of electricity and other fuels at the point of use by customers. **Resource energy** includes all energy resources used to generate electricity, including the energy content of the coal, petroleum, nuclear and renewable fuels. Resource energy also includes the energy used to produce the electricity imported into Wisconsin from other states and Canada. Because about 70 percent of the energy used to generate and distribute electricity to its point of use is lost as waste heat, resource consumption figures are greater than end use consumption figures.

Prior to 1997, petroleum was Wisconsin's leading energy source, but its share of resource energy use has fallen from a peak of 40 percent in 1977 to 27.2 percent in 2011. Coal is the leading resource energy source in Wisconsin, comprising 29.8 percent of all resource energy use. Coal surpassed natural gas as the state's second largest energy source in 1981, and in 1997 coal surpassed petroleum as the state's leading source of resource energy.

In 2011, renewables increased by 4.4 percent to comprise 5.4 percent of Wisconsin's overall use of resource energy consumption. This includes hydroelectric generation, solar (photovoltaic and solar thermal), biomass (e.g., wood and wood by-products), biogas (e.g., agricultural manure digesters, landfill gas), and wind.

Nuclear power in Wisconsin is no longer owned by utilities, but by independent power producers who sell the power to customers in Wisconsin.

In general, the residential (25.3 percent), industrial (27.0 percent) and transportation (24.8 percent) sectors each account for about one-quarter of Wisconsin's resource energy consumption. The commercial and agricultural sectors account for 20.6 percent and 2.2 percent, respectively.

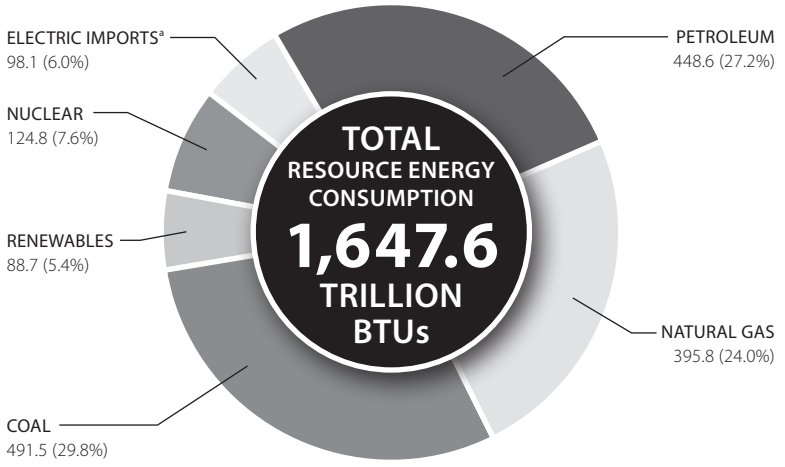
In 2011, end-use energy consumption increased in all sectors except transportation. The residential sector saw a 3.5 percent increase, the commercial sector a 2.9 percent increase, and increases of 2.2 and 8.3 percent for the industrial and agriculture sectors respectively. Energy use in the transportation sector decreased 2.4 percent.

RESOURCE Energy Consumption	2011	Percent of Wisconsin's Resource Energy Consumption
Resource Energy Consumption	▼ 0.8% overall	
BY FUEL		
Coal Consumption, Utilities	▼ 6.0%	29.8%
Petroleum Consumption	▼ 1.5%	27.2%
Natural Gas Consumption	▲ 5.9%	24.0%
Electricity Imports	▲ 22.5%	6.0%
Renewables	▲ 4.4%	5.4%
BY ECONOMIC SECTOR		
Transportation	▼ 2.4%	24.8%
Residential	▲ 0.4%	25.3%
Industrial	▼ 0.6%	27.0%
Commercial	▼ 0.7%	20.6%
Agricultural	▲ 2.1%	2.2%

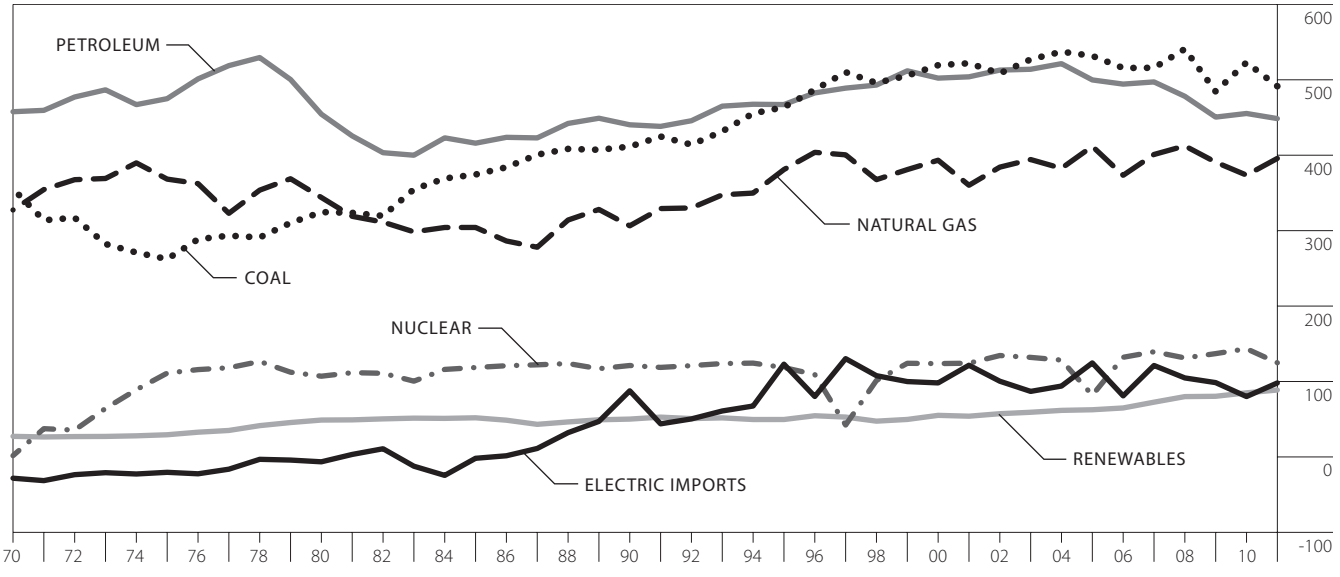
END-USE Energy Consumption	2011	Percent of Wisconsin's End-Use Energy Consumption
End-Use Energy Consumption	▲ 1.0% overall	
BY FUEL		
Petroleum Consumption	▼ 1.5%	39.0%
Natural Gas Consumption	▲ 5.1%	30.3%
Electricity Consumption	▼ 0.1%	20.4%
Renewables Consumption	▲ 3.8%	6.5%
Coal Consumption, Non-Utilities	▼ 2.0%	3.8%
BY ECONOMIC SECTOR		
Transportation	▼ 2.4%	35.6%
Industrial	▲ 2.2%	23.9%
Residential	▲ 3.5%	22.8%
Commercial	▲ 2.9%	15.3%
Agricultural	▲ 8.3%	2.4%

Wisconsin Resource Energy Consumption, by Type of Fuel

2011 TRILLIONS OF BTU AND PERCENT OF TOTAL



1970-2011 TRILLIONS OF BTU



a "Electric imports" is the estimated resource energy used in other states or Canada to produce the electricity imported into Wisconsin. This resource energy is estimated assuming 11,300 Btu of resource energy per kWh imported into Wisconsin. Values below the "0" indicate that resource energy was used in Wisconsin to produce electricity that was exported out of state.

Source: Wisconsin State Energy Office

Wisconsin Resource Energy Consumption, by Type of Fuel

1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal[a]		Renewables[b]		Nuclear[d]		Electric Imports[c]		Total
1970	457.7	*40.1%*	327.4	*28.7%*	355.4	*31.1%*	27.3	*2.4%*	1.7	*0.1%*	-28.2	*-2.5%*	1,141.3
1975	475.0	*38.8%*	368.3	*30.0%*	262.3	*21.4%*	29.4	*2.4%*	111.2	*9.1%*	-20.4	*-1.7%*	1,225.8
1980	454.4	*35.7%*	344.0	*27.0%*	324.6	*25.5%*	48.9	*3.8%*	107.0	*8.4%*	-6.5	*-0.5%*	1,272.5
1985[r]	416.0	*32.9%*	304.2	*24.1%*	374.4	*29.6%*	51.9	*4.1%*	118.6	*9.4%*	-1.8	*-0.1%*	1,263.3
1990[r]	440.3	*31.1%*	306.4	*21.6%*	411.4	*29.0%*	50.2	*3.5%*	121.2	*8.6%*	87.7	*6.2%*	1,417.2
1995[r]	467.2	*29.1%*	381.0	*23.8%*	463.7	*28.9%*	49.6	*3.1%*	118.5	*7.4%*	123.0	*7.7%*	1,603.0
1996[r]	482.6	*29.8%*	403.8	*25.0%*	486.9	*30.1%*	54.6	*3.4%*	109.3	*6.8%*	80.2	*5.0%*	1,617.4
1997[r]	489.0	*30.1%*	400.5	*24.6%*	510.1	*31.4%*	52.8	*3.3%*	42.3	*2.6%*	130.3	*8.0%*	1,625.1
1998[r]	493.0	*30.6%*	367.7	*22.8%*	495.8	*30.7%*	47.4	*2.9%*	101.5	*6.3%*	107.7	*6.7%*	1,613.1
1999[r]	511.9	*30.6%*	381.0	*22.8%*	505.5	*30.2%*	49.7	*3.0%*	124.1	*7.4%*	99.9	*6.0%*	1,672.2
2000[r]	502.2	*29.7%*	393.4	*23.2%*	519.4	*30.7%*	55.1	*3.3%*	123.8	*7.3%*	98.1	*5.8%*	1,692.0
2001[r]	504.0	*29.9%*	360.2	*21.4%*	521.9	*31.0%*	54.0	*3.2%*	124.3	*7.4%*	121.6	*7.2%*	1,686.0
2002[r]	512.9	*30.2%*	384.2	*22.6%*	508.5	*30.0%*	57.3	*3.4%*	134.4	*7.9%*	100.4	*5.9%*	1,697.7
2003[r]	514.0	*30.0%*	394.3	*23.0%*	527.0	*30.8%*	59.2	*3.5%*	132.0	*7.7%*	86.9	*5.1%*	1,713.4
2004[r]	521.4	*30.2%*	382.7	*22.2%*	537.2	*31.1%*	61.7	*3.6%*	128.4	*7.4%*	94.0	*5.4%*	1,725.4
2005[r]	499.8	*29.2%*	411.8	*24.0%*	531.7	*31.1%*	62.5	*3.7%*	81.8	*4.8%*	124.7	*7.3%*	1,712.4
2006[r]	494.3	*29.8%*	373.4	*22.5%*	515.7	*31.0%*	64.9	*3.9%*	132.1	*8.0%*	81.0	*4.9%*	1,661.4
2007[r]	497.2	*28.5%*	401.0	*22.9%*	515.9	*29.5%*	72.6	*4.2%*	139.4	*8.0%*	121.3	*6.9%*	1,747.4
2008[r]	478.1	*27.4%*	412.4	*23.6%*	540.8	*31.0%*	80.0	*4.6%*	131.3	*7.5%*	104.7	*6.0%*	1,747.3
2009[r]	450.6	*27.4%*	390.8	*23.8%*	484.5	*29.5%*	80.4	*4.9%*	137.0	*8.3%*	98.5	*6.0%*	1,641.7
2010[r]	455.4	*27.4%*	373.6	*22.5%*	523.0	*31.5%*	85.0	*5.1%*	143.4	*8.6%*	80.1	*4.8%*	1,660.5
2011[p]	**448.6**	***27.2%***	**395.8**	***24.0%***	**491.5**	***29.8%***	**88.7**	***5.4%***	**124.8**	***7.6%***	**98.1**	***6.0%***	**1,647.6**

a Including petroleum coke.

b Renewables includes solar, wind, wood, biogas, biomass, ethanol and hydroelectric.

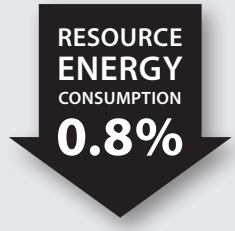
c Electric imports are the estimated resource energy used in other states or Canada to produce the electricity imported into Wisconsin. This resource energy is estimated assuming 11,300 Btu of resource energy per kWh imported into Wisconsin. Negative percentages indicate that resource energy was used in Wisconsin to produce electricity that was exported out of state.

d Nuclear energy reported here is from power plants formerly owned by Wisconsin utilities and currently owned by independent power producers.

p Preliminary estimates.

r Revised due to revisions in contributing tables.

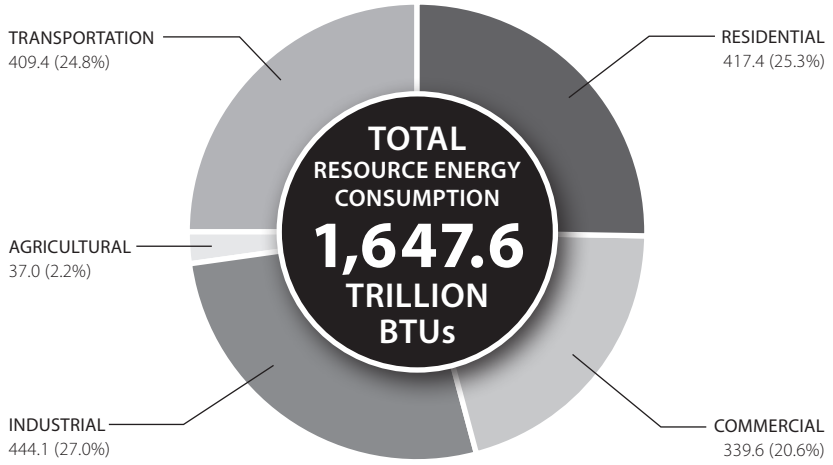
Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewable resources and electricity use, by economic sector, and for Wisconsin electric utility energy use.



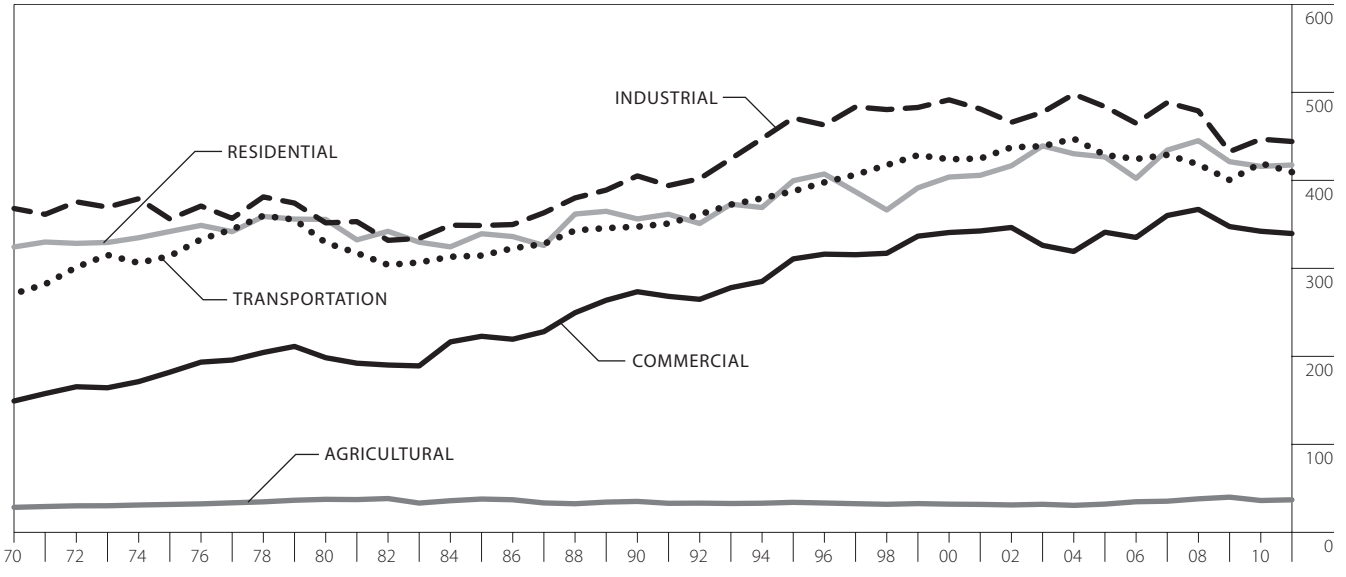
Resource energy consumption decreased 0.8 percent in 2011. Petroleum use decreased 1.5 percent; natural gas, increased 5.9 percent; coal, decreased 6.0 percent; and renewables increased 4.4 percent.

Wisconsin Resource Energy Consumption, by Economic Sector

2011 TRILLIONS OF BTU AND PERCENT OF TOTAL



1970-2011 TRILLIONS OF BTU



Source: Wisconsin State Energy Office.

Wisconsin Resource Energy Consumption, by Economic Sector

1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Residential		Commercial		Industrial		Agricultural[a]		Transportation		Total[b]
1970	324.3	*28.4%*	149.3	*13.1%*	368.0	*32.2%*	28.4	*2.5%*	271.2	*23.8%*	1,141.3
1975	341.9	*27.9%*	182.0	*14.9%*	356.1	*29.1%*	31.7	*2.6%*	314.0	*25.6%*	1,225.8
1980	355.6	*27.9%*	198.5	*15.6%*	351.7	*27.6%*	37.5	*2.9%*	329.2	*25.9%*	1,272.5
1985[r]	339.4	*26.9%*	222.8	*17.6%*	348.7	*27.6%*	37.9	*3.0%*	314.5	*24.9%*	1,263.2
1990[r]	356.2	*25.1%*	273.4	*19.3%*	405.1	*28.6%*	35.2	*2.5%*	347.3	*24.5%*	1,417.2
1995[r]	399.6	*24.9%*	310.8	*19.4%*	470.8	*29.4%*	34.1	*2.1%*	387.7	*24.2%*	1,603.0
1996[r]	407.2	*25.2%*	316.1	*19.5%*	462.9	*28.6%*	33.4	*2.1%*	397.7	*24.6%*	1,617.4
1997[r]	387.0	*23.8%*	315.5	*19.4%*	483.5	*29.8%*	32.6	*2.0%*	406.4	*25.0%*	1,625.1
1998[r]	366.3	*22.7%*	317.1	*19.7%*	480.5	*29.8%*	31.9	*2.0%*	417.3	*25.9%*	1,613.2
1999[r]	391.5	*23.4%*	336.6	*20.1%*	482.8	*28.9%*	32.7	*2.0%*	428.6	*25.6%*	1,672.2
2000[r]	403.8	*23.9%*	340.7	*20.1%*	491.5	*29.0%*	32.0	*1.9%*	424.0	*25.1%*	1,692.0
2001[r]	405.8	*24.1%*	342.5	*20.3%*	481.1	*28.5%*	31.8	*1.9%*	424.8	*25.2%*	1,686.0
2002[r]	416.6	*24.5%*	346.5	*20.4%*	465.9	*27.4%*	31.2	*1.8%*	437.5	*25.8%*	1,697.7
2003[r]	439.2	*25.6%*	326.2	*19.0%*	477.4	*27.9%*	31.9	*1.9%*	438.8	*25.6%*	1,713.4
2004[r]	430.2	*24.9%*	319.2	*18.5%*	497.9	*28.9%*	30.7	*1.8%*	447.3	*25.9%*	1,725.4
2005[r]	426.6	*24.9%*	341.1	*19.9%*	483.7	*28.3%*	32.1	*1.9%*	428.9	*25.0%*	1,712.4
2006[r]	402.3	*24.2%*	335.1	*20.2%*	464.9	*28.0%*	34.8	*2.1%*	424.3	*25.5%*	1,661.4
2007[r]	434.4	*24.9%*	360.1	*20.6%*	488.5	*28.0%*	35.4	*2.0%*	429.0	*24.6%*	1,747.4
2008[r]	445.1	*25.5%*	367.0	*21.0%*	478.9	*27.4%*	38.1	*2.2%*	418.2	*23.9%*	1,747.3
2009[r]	421.2	*25.7%*	347.5	*21.2%*	432.7	*26.4%*	40.0	*2.4%*	400.4	*24.4%*	1,641.7
2010[r]	415.9	*25.0%*	342.2	*20.6%*	446.8	*26.9%*	36.2	*2.2%*	419.4	*25.3%*	1,660.4
2011[p]	**417.4**	***25.3%***	**339.6**	***20.6%***	**444.1**	***27.0%***	**37.0**	***2.2%***	**409.4**	***24.8%***	**1,647.6**

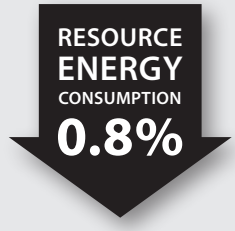
a Beginning in 2005, the Wisconsin SEO discontinued a per-acre approach to gathering fuel data for the agriculture sector and substituted data from the Wisconsin Department of Revenue and from the federal National Agriculture Statistics Service (NASS). Data from NASS were not available previously.

b Totals may not add due to rounding.

p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewable energy and electricity use, by economic sector, and for Wisconsin electric utility energy use.



Total resource energy consumption decreased 0.8 percent in 2011. The residential and agricultural sector saw increases of 0.4 and 2.1 percent, respectively. Other sectors saw decreases of 0.7 percent (commercial), 0.6 percent (industrial) and 2.4 percent (transportation).

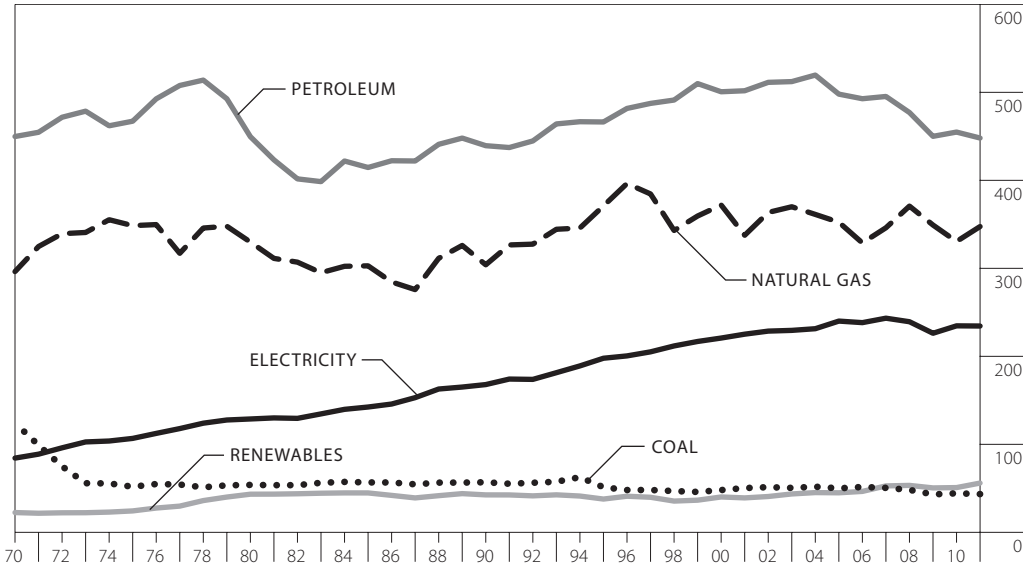
Wisconsin End-Use Energy Consumption, by Type of Fuel

END-USE ENERGY 1.0% IN 2011

End use energy is a measure of the energy content of fuels at the point of consumption. Since much of the energy needed to generate electricity is lost in the generation process, end use energy consumption figures will always be lower than the directly linked resource energy consumption figures.

End use energy increased by 1.0 percent overall in 2011, after dropping by 0.14 percent in 2010. Petroleum continues to be the most-used end use energy source in Wisconsin (39.0 percent).

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal		Renewables		Electricity		Total
1970	449.8	*46.0%*	296.3	*30.3%*	124.3	*12.7%*	22.5	*2.3%*	84.4	*8.6%*	977.2
1975	467.2	*46.8%*	348.5	*34.9%*	51.8	*5.2%*	24.3	*2.4%*	106.7	*10.7%*	998.6
1980[r]	449.6	*44.7%*	329.9	*32.8%*	53.9	*5.4%*	43.3	*4.3%*	128.8	*12.8%*	1,005.6
1985[r]	414.6	*43.1%*	302.8	*31.5%*	56.7	*5.9%*	44.9	*4.7%*	142.4	*14.8%*	961.5
1990[r]	439.4	*43.4%*	304.0	*30.1%*	56.9	*5.6%*	43.3	*4.3%*	167.9	*16.6%*	1,011.5
1995[r]	466.3	*41.3%*	370.9	*32.9%*	51.3	*4.5%*	41.9	*3.7%*	197.8	*17.5%*	1,128.3
2000[r]	500.7	*42.1%*	372.0	*31.3%*	48.0	*4.0%*	48.1	*4.0%*	220.8	*18.6%*	1,189.5
2001[r]	501.8	*43.2%*	337.6	*29.1%*	50.3	*4.3%*	46.4	*4.0%*	225.2	*19.4%*	1,161.3
2002[r]	511.3	*42.5%*	363.5	*30.2%*	51.3	*4.3%*	48.2	*4.0%*	228.7	*19.0%*	1,203.0
2003[r]	512.2	*42.2%*	370.0	*30.5%*	50.5	*4.2%*	52.1	*4.3%*	229.5	*18.9%*	1,214.3
2004[r]	519.6	*42.7%*	361.3	*29.7%*	51.9	*4.3%*	53.8	*4.4%*	231.4	*19.0%*	1,217.9
2005[r]	498.0	*41.6%*	352.4	*29.5%*	50.0	*4.2%*	55.3	*4.6%*	240.1	*20.1%*	1,195.7
2006[r]	492.7	*42.1%*	328.9	*28.1%*	51.6	*4.4%*	57.5	*4.9%*	238.3	*20.4%*	1,169.0
2007[r]	495.3	*41.2%*	346.1	*28.8%*	50.5	*4.2%*	66.4	*5.5%*	243.4	*20.3%*	1,201.6
2008[r]	477.1	*39.5%*	370.7	*30.7%*	48.2	*4.0%*	71.7	*5.9%*	239.3	*19.8%*	1,207.0
2009[r]	450.0	*39.5%*	349.2	*30.7%*	43.1	*3.8%*	69.9	*6.1%*	226.2	*19.9%*	1,138.4
2010[r]	454.8	*40.0%*	330.5	*29.1%*	44.3	*3.9%*	72.4	*6.4%*	234.7	*20.6%*	1,136.8
2011[p]	**448.1**	***39.0%***	**347.5**	***30.3%***	**43.5**	***3.8%***	**75.1**	***6.5%***	**234.5**	***20.4%***	**1,148.7**

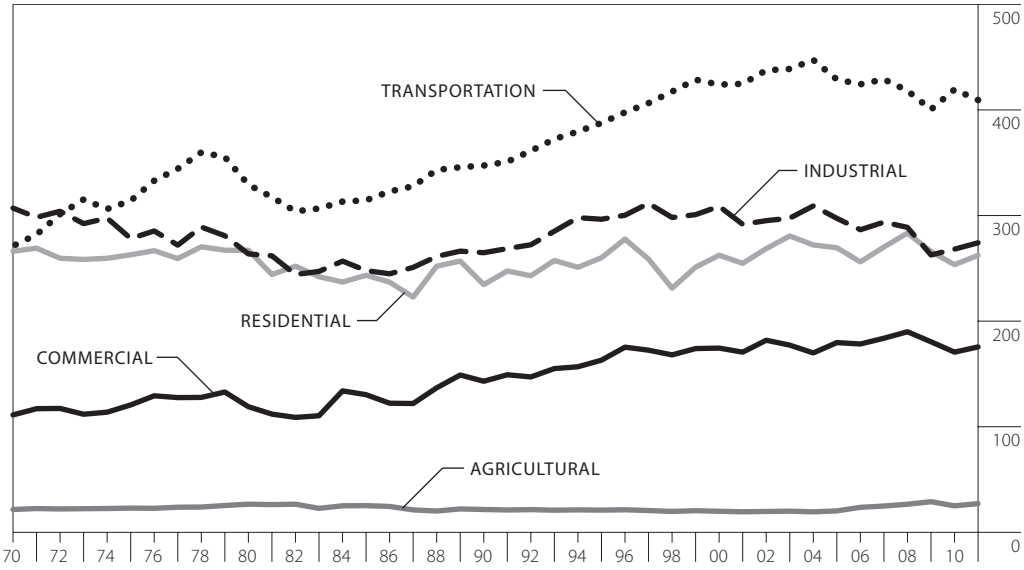
p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewable and electricity use, by economic sector, and for Wisconsin electric utility energy use.

Wisconsin End-Use Energy Consumption, by Economic Sector

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Residential		Commercial		Industrial		Agricultural		Transportation		Total
1970	266.2	*27.2%*	111.2	*11.4%*	307.0	*31.4%*	21.6	*2.2%*	271.2	*27.8%*	977.2
1975	262.8	*26.3%*	120.6	*12.1%*	278.2	*27.9%*	22.9	*2.3%*	314.0	*31.4%*	998.6
1980r	267.1	*26.6%*	119.0	*11.8%*	263.6	*26.2%*	26.7	*2.7%*	329.2	*32.7%*	1,005.6
1985r	243.5	*25.3%*	130.3	*13.6%*	247.9	*25.8%*	25.3	*2.6%*	314.5	*32.7%*	961.5
1990r	234.6	*23.2%*	143.1	*14.1%*	264.8	*26.2%*	21.6	*2.1%*	347.3	*34.3%*	1,011.5
1995r	260.0	*23.0%*	163.0	*14.4%*	296.5	*26.3%*	21.0	*1.9%*	387.7	*34.4%*	1,128.3
2000r	262.4	*22.1%*	174.5	*14.7%*	308.7	*26.0%*	20.0	*1.7%*	424.0	*35.6%*	1,189.5
2001r	254.7	*21.9%*	170.6	*14.7%*	291.7	*25.1%*	19.5	*1.7%*	424.8	*36.6%*	1,161.3
2002r	268.7	*22.3%*	181.9	*15.1%*	295.1	*24.5%*	19.8	*1.6%*	437.5	*36.4%*	1,203.0
2003r	280.6	*23.1%*	177.3	*14.6%*	297.5	*24.5%*	20.0	*1.7%*	438.8	*36.1%*	1,214.3
2004r	272.1	*22.3%*	169.9	*13.9%*	309.1	*25.4%*	19.4	*1.6%*	447.3	*36.7%*	1,217.9
2005r	269.5	*22.5%*	179.7	*15.0%*	297.3	*24.9%*	20.3	*1.7%*	428.9	*35.9%*	1,195.7
2006r	256.1	*21.9%*	178.3	*15.3%*	286.6	*24.5%*	23.7	*2.0%*	424.3	*36.3%*	1,169.0
2007r	270.2	*22.5%*	183.8	*15.3%*	293.8	*24.4%*	24.9	*2.1%*	429.0	*35.7%*	1,201.6
2008r	283.4	*23.5%*	190.0	*15.7%*	288.8	*23.9%*	26.6	*2.2%*	418.2	*34.6%*	1,207.0
2009r	265.8	*23.4%*	180.5	*15.9%*	262.6	*23.1%*	29.0	*2.5%*	400.4	*35.2%*	1,138.4
2010r	253.5	*22.3%*	170.7	*15.0%*	268.2	*23.6%*	25.1	*2.2%*	419.4	*36.9%*	1,136.8
2011p	**262.3**	***22.8%***	**175.6**	***15.3%***	**274.2**	***23.9%***	**27.2**	***2.4%***	**409.4**	***35.6%***	**1,148.7**

p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewable energy and electricity use, by economic sector, and for Wisconsin electric utility energy use.

END-USE ENERGY 1.0% IN 2011

End use energy consumption increased 1.0 percent in 2011. The transportation sector continues to be the largest consumer of end use energy in Wisconsin (35.6 percent).

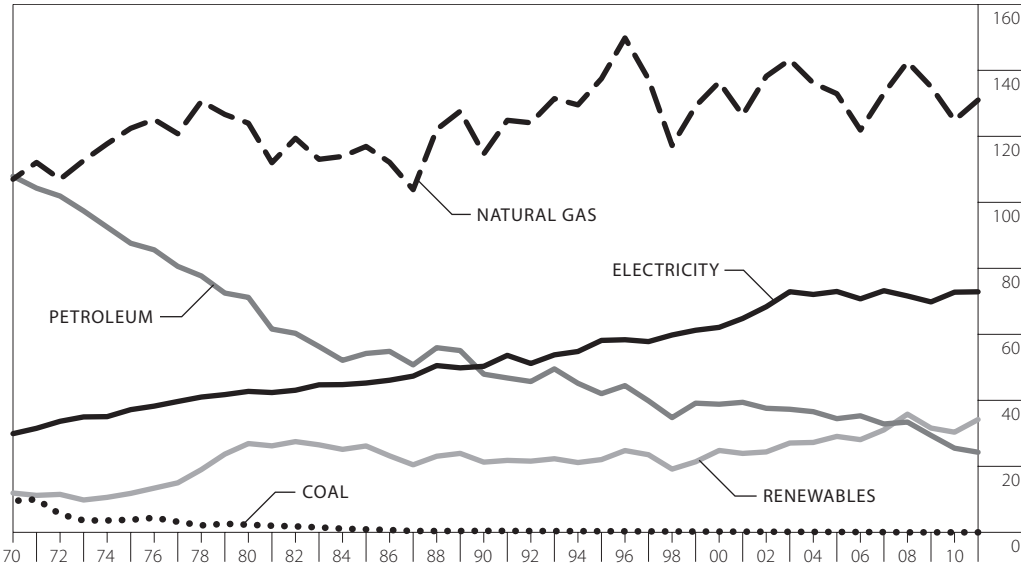
Wisconsin Residential Energy Use, by Type of Fuel

RESIDENTIAL END-USE ENERGY 3.5% IN 2011

Residential end use energy increased 3.5 percent in 2011. Natural gas continues to be the dominant fuel used in Wisconsin homes (49.9 percent), providing just under half of the end use energy used.

Electricity (0.2 percent), renewables (12.6 percent) and natural gas (4.9) consumption increased from 2010, while petroleum use decreased by 4.8 percent. Between 1970 and 2011, petroleum use in the residential sector declined 77.5 percent.

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal		Renewables[a]		Electricity		Total End Use	Total Resource[b]
1970	107.9	*40.5%*	107.0	*40.2%*	9.5	*3.6%*	11.9	*4.5%*	29.9	*11.2%*	266.2	324.3
1975	87.6	*33.3%*	122.4	*46.6%*	3.8	*1.4%*	11.8	*4.5%*	37.2	*14.1%*	262.8	341.9
1980[r]	71.2	*26.7%*	124.0	*46.4%*	2.3	*0.9%*	26.9	*10.1%*	42.7	*16.0%*	267.1	355.6
1985[r]	54.2	*22.3%*	116.9	*48.0%*	0.9	*0.4%*	26.2	*10.8%*	45.2	*18.6%*	243.5	339.4
1990[r]	47.9	*20.4%*	114.7	*48.9%*	0.4	*0.2%*	21.3	*9.1%*	50.3	*21.4%*	234.6	356.2
1995[r]	42.0	*16.2%*	137.5	*52.9%*	0.3	*0.1%*	22.0	*8.5%*	58.2	*22.4%*	260.0	399.6
2000[r]	38.8	*14.8%*	136.4	*52.0%*	0.2	*0.1%*	24.8	*9.5%*	62.1	*23.7%*	262.4	403.8
2005[r]	34.4	*12.8%*	132.9	*49.3%*	0.1	*0.0%*	29.1	*10.8%*	73.0	*27.1%*	269.5	426.6
2006[r]	35.3	*13.8%*	121.9	*47.6%*	0.1	*0.0%*	28.1	*11.0%*	70.7	*27.6%*	256.1	402.3
2007[r]	32.8	*12.2%*	133.0	*49.2%*	0.1	*0.0%*	31.0	*11.5%*	73.2	*27.1%*	270.2	434.4
2008[r]	33.4	*11.8%*	142.5	*50.3%*	0.0	*0.0%*	35.8	*12.6%*	71.6	*25.3%*	283.4	445.1
2009[r]	29.4	*11.1%*	135.0	*50.8%*	0.0	*0.0%*	31.6	*11.9%*	69.8	*26.3%*	265.8	421.2
2010[r]	25.5	*10.1%*	124.9	*49.3%*	0.0	*0.0%*	30.3	*12.0%*	72.8	*28.7%*	253.5	415.9
2011[p]	**24.3**	***9.3%***	**131.0**	***49.9%***	**0.0**	***0.0%***	**34.2**	***13.0%***	**72.9**	***27.8%***	**262.3**	**417.4**

a Renewables includes wood/biomass, solar photovoltaic and solar thermal, wind and biogas.

b Includes energy resources (and losses) attributable to electricity generation.

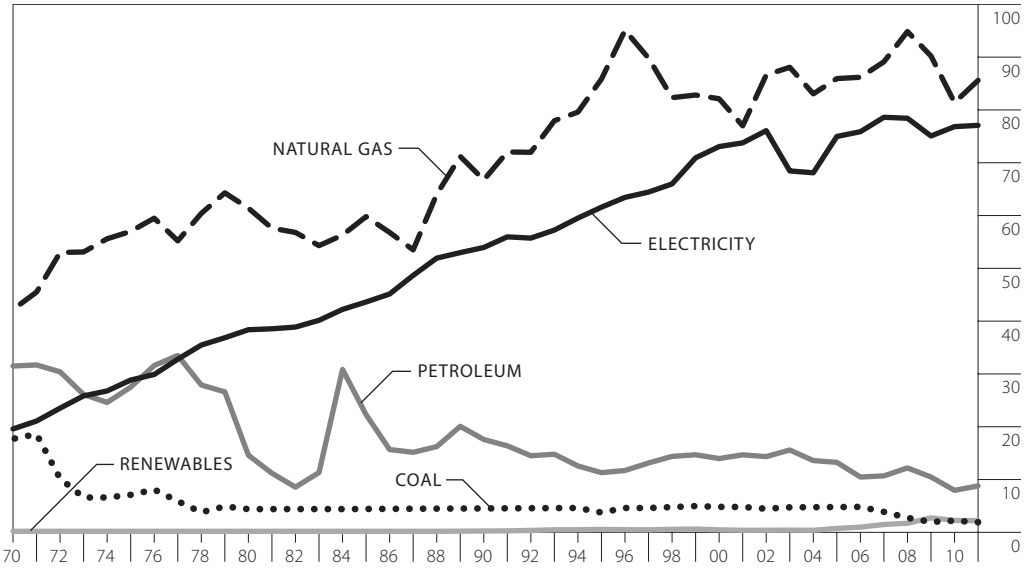
p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewables and electricity use, by economic sector, and for Wisconsin electric utility energy use.

Wisconsin Commercial Energy Use, by Type of Fuel

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal		Renewables[a]		Electricity		Total End Use	Total Resource[b]
1970	31.5	*28.3%*	42.2	*38.0%*	17.7	*15.9%*	0.2	*0.2%*	19.6	*17.6%*	111.2	149.3
1975	27.5	*22.8%*	57.0	*47.2%*	7.1	*5.9%*	0.2	*0.2%*	28.8	*23.9%*	120.6	182.0
1980	14.6	*12.3%*	61.4	*51.6%*	4.4	*3.7%*	0.2	*0.2%*	38.4	*32.3%*	119.0	198.5
1985[r]	22.3	*17.1%*	59.8	*45.9%*	4.4	*3.4%*	0.2	*0.2%*	43.6	*33.5%*	130.3	222.8
1990[r]	17.6	*12.3%*	66.8	*46.7%*	4.5	*3.2%*	0.3	*0.2%*	54.0	*37.7%*	143.1	273.4
1995[r]	11.3	*6.9%*	85.9	*52.7%*	3.8	*2.3%*	0.6	*0.3%*	61.6	*37.8%*	163.0	310.8
2000[r]	14.0	*8.0%*	82.1	*47.1%*	4.8	*2.8%*	0.5	*0.3%*	73.1	*41.9%*	174.5	340.7
2005[r]	13.3	*7.4%*	85.9	*47.8%*	4.8	*2.7%*	0.7	*0.4%*	75.0	*41.7%*	179.7	341.1
2006[r]	10.5	*5.9%*	86.2	*48.3%*	4.8	*2.7%*	1.0	*0.6%*	75.9	*42.5%*	178.3	335.1
2007[r]	10.7	*5.8%*	89.1	*48.5%*	3.9	*2.1%*	1.5	*0.8%*	78.6	*42.8%*	183.8	360.1
2008[r]	12.2	*6.4%*	94.9	*49.9%*	2.7	*1.4%*	1.7	*0.9%*	78.4	*41.3%*	189.9	367.0
2009[r]	10.5	*5.8%*	90.2	*50.0%*	2.0	*1.1%*	2.7	*1.5%*	75.1	*41.6%*	180.5	347.5
2010[r]	8.0	*4.7%*	81.4	*47.7%*	2.2	*1.3%*	2.3	*1.3%*	76.8	*45.0%*	170.7	342.2
2011[p]	**8.8**	***5.0%***	**85.6**	***48.8%***	**1.9**	***1.1%***	**2.2**	***1.3%***	**77.1**	***43.9%***	**175.6**	**339.6**

a Renewables includes solar, wood, biomass, wind, hydro and biogas.

b Includes energy resources (and losses) attributable to electricity generation.

p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewables and electricity use, by economic sector, and for Wisconsin electric utility energy use.

COMMERCIAL END-USE ENERGY 2.9% IN 2011

In 2011, commercial sector end use energy increased 2.9 percent. Since 1980, commercial end use energy has increased 47.6 percent. Electricity energy use doubled (100.9 percent) over the same period. The commercial sector saw decreases in renewables (2.8 percent) and coal (13.3 percent), and increases in every other sector: petroleum (10.6 percent), natural gas (5.2 percent), and electricity (0.3 percent). Natural gas remains the major energy source, comprising 48.8 percent of commercial sector energy, followed by electricity at 43.9 percent. Electricity use in this sector increased 293.6 percent since 1970. Petroleum's importance in this sector has declined from providing 28.3 percent of the energy used in 1970, to presently accounting for only 5.0 percent of total commercial energy consumption.

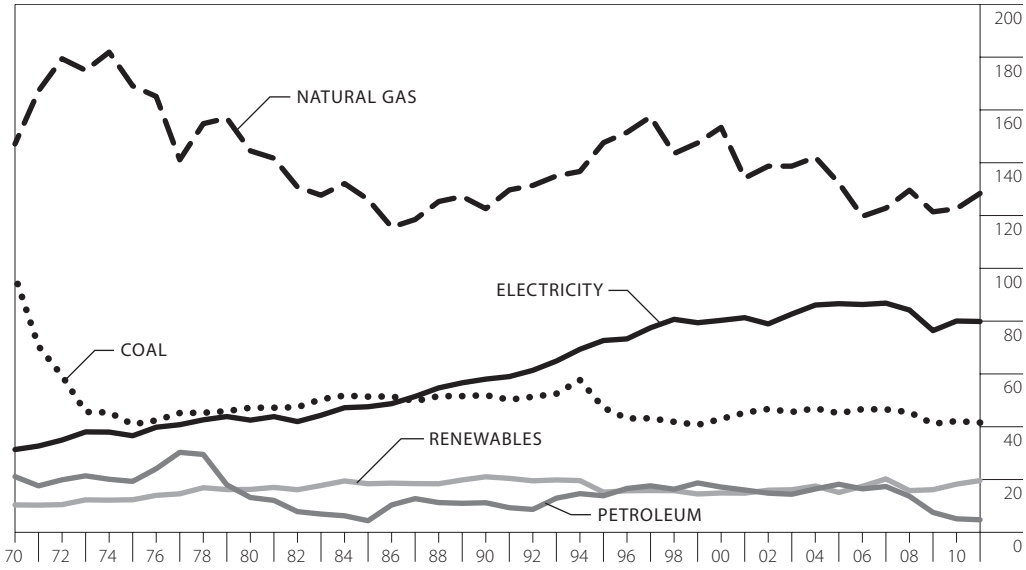
Wisconsin Industrial Energy Use, by Type of Fuel

INDUSTRIAL END-USE ENERGY 2.2% IN 2011

End use energy consumption in the industrial sector increased 2.2 percent in 2011, following an increase of 2.1 percent in 2010.

The major industrial energy sources are natural gas (46.8 percent) and electricity (29.1 percent), trailed by coal (15.2 percent), renewables (7.1 percent) and petroleum (1.7 percent). While petroleum continues to be the largest end use energy source in Wisconsin, in the industrial sector petroleum comprises the smallest amount of energy use by fuel. The use of petroleum, coal and electricity declined in the industrial sector by 6.8, 1.4 and 0.2 percent, respectively. The sector saw increases in natural gas (4.7 percent) and renewables (7.4 percent).

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal		Renewables[a]		Electricity		Total End Use	Total Resource[b,c]
1970	21.1	*6.9%*	147.1	*47.9%*	97.1	*31.6%*	10.4	*3.4%*	31.4	*10.2%*	307.0	368.0
1975	19.3	*6.9%*	169.1	*60.8%*	40.9	*14.7%*	12.3	*4.4%*	36.6	*13.2%*	278.2	356.1
1980	13.2	*5.0%*	144.5	*54.8%*	47.2	*17.9%*	16.2	*6.2%*	42.5	*16.1%*	263.6	351.7
1985[r]	4.4	*1.8%*	126.1	*50.9%*	51.4	*20.7%*	18.4	*7.4%*	47.6	*19.2%*	247.9	348.7
1990[r]	11.2	*4.2%*	122.6	*46.3%*	51.9	*19.6%*	21.0	*7.9%*	58.0	*21.9%*	264.8	405.1
1995[r]	13.8	*4.7%*	147.6	*49.8%*	47.2	*15.9%*	15.2	*5.1%*	72.7	*24.5%*	296.5	470.8
2000[r]	17.2	*5.6%*	153.4	*49.7%*	43.0	*13.9%*	14.9	*4.8%*	80.3	*26.0%*	308.7	491.5
2005[r]	18.2	*6.1%*	132.3	*44.5%*	45.1	*15.2%*	15.1	*5.1%*	86.6	*29.1%*	297.3	483.7
2006[r]	16.5	*5.7%*	119.7	*41.8%*	46.7	*16.3%*	17.4	*6.1%*	86.3	*30.1%*	286.6	464.9
2007[r]	17.4	*5.9%*	122.8	*41.8%*	46.6	*15.8%*	20.2	*6.9%*	86.8	*29.6%*	293.8	488.5
2008[r]	13.7	*4.7%*	129.6	*44.9%*	45.5	*15.8%*	15.8	*5.5%*	84.2	*29.2%*	288.8	478.9
2009[r]	7.5	*2.9%*	121.4	*46.2%*	41.1	*15.7%*	16.2	*6.2%*	76.4	*29.1%*	262.6	432.7
2010[r]	5.1	*1.9%*	122.6	*45.7%*	42.1	*15.7%*	18.3	*6.8%*	80.0	*29.8%*	268.2	446.8
2011[p]	**4.8**	***1.7%***	**128.4**	***46.8%***	**41.6**	***15.2%***	**19.6**	***7.1%***	**79.9**	***29.1%***	**274.2**	**444.1**

a Renewables includes hydro, wood, wind, biogas and biomass.

b Includes energy resources (and losses) attributable to electricity generation.

c Totals may not add due to rounding.

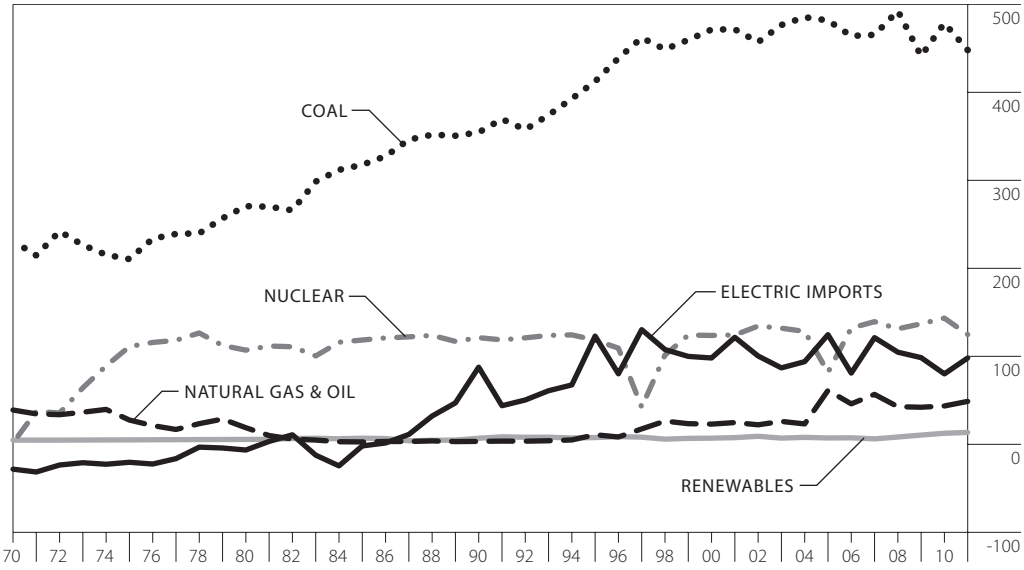
p Preliminary estimates.

r Revised due to revisions in contributing tables.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal, renewables and electricity use, by economic sector, and for Wisconsin electric utility energy use.

Wisconsin Energy Use for Electricity Generation, in Btu, by Type of Fuel

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Petroleum		Natural Gas		Coal[a]		Renewables		Nuclear[b]		Electric Imports[c]		Hydro		Total
1970	7.9	*3.2%*	31.1	*12.5%*	231.1	*93.0%*	4.8	*1.9%*	1.7	*0.7%*	-28.2	*-11.4%*	4.8	*1.9%*	248.4
1975	7.8	*2.3%*	19.8	*5.9%*	210.5	*63.0%*	5.1	*1.5%*	111.2	*33.3%*	-20.4	*-6.1%*	5.1	*1.5%*	333.9
1980	4.8	*1.2%*	14.1	*3.6%*	270.7	*68.4%*	5.6	*1.4%*	107.0	*27.0%*	-6.5	*-1.6%*	5.6	*1.4%*	395.8
1985[r]	1.4	*0.3%*	1.4	*0.3%*	317.7	*71.5%*	7.0	*1.6%*	118.6	*26.7%*	-1.8	*-0.4%*	7.0	*1.6%*	444.2
1990[r]	1.0	*0.2%*	2.4	*0.4%*	354.5	*61.8%*	6.9	*1.2%*	121.2	*21.1%*	87.7	*15.3%*	6.1	*1.1%*	573.7
1995[r]	0.8	*0.1%*	10.1	*1.5%*	412.4	*61.3%*	7.7	*1.1%*	118.5	*17.6%*	123.0	*18.3%*	7.2	*1.1%*	672.5
2000[r]	1.6	*0.2%*	21.4	*3.0%*	471.4	*65.2%*	7.0	*1.0%*	123.8	*17.1%*	98.1	*13.6%*	6.0	*0.8%*	723.3
2005[r]	1.9	*0.2%*	59.4	*7.8%*	481.7	*63.7%*	7.2	*1.0%*	81.8	*10.8%*	124.7	*16.5%*	5.1	*0.7%*	756.7
2006[r]	1.5	*0.2%*	44.5	*6.1%*	464.1	*63.5%*	7.4	*1.0%*	132.1	*18.1%*	81.0	*11.1%*	4.9	*0.7%*	730.7
2007[r]	1.9	*0.2%*	54.9	*7.0%*	465.4	*59.0%*	6.2	*0.8%*	139.4	*17.7%*	121.3	*15.4%*	4.5	*0.6%*	789.1
2008[r]	1.1	*0.1%*	41.7	*5.3%*	492.6	*63.2%*	8.3	*1.1%*	131.3	*16.8%*	104.7	*13.4%*	4.9	*0.6%*	779.7
2009[r]	0.6	*0.1%*	41.6	*5.7%*	441.4	*60.5%*	10.5	*1.4%*	137.0	*18.8%*	98.5	*13.5%*	4.6	*0.6%*	729.6
2010[r]	0.5	*0.1%*	43.1	*5.7%*	478.7	*63.1%*	12.6	*1.7%*	143.4	*18.9%*	80.1	*10.6%*	6.9	*0.9%*	758.4
2011[p]	**0.5**	***0.1%***	**48.3**	***6.6%***	**448.0**	***61.1%***	**13.6**	***1.9%***	**124.8**	***17.0%***	**98.1**	***13.4%***	**6.6**	***0.9%***	**733.4**

a Includes petroleum coke.
b Based on 10,800 Btu per kWh.
c Estimated assuming 11,300 Btu of resource energy per kWh imported into Wisconsin. Numbers in parentheses and negative percentages indicate resource energy used in Wisconsin to produce electricity that was exported.
p Preliminary estimates.
r Revised.

Source: Public Service Commission of Wisconsin, Accounts and Finance Division, *Statistics of Wisconsin Public Utilities*, Bulletin #8 (1970-1994); U.S. Department of Agriculture, Rural Electrification Administration, *Annual Statistical Report*, REA Bulletin 1-1 (1970-1995); Wisconsin Department of Natural Resources, Annual Survey of Point Source Emissions, unpublished (1971-2011); American Gas Association, Gas Facts (1970-1995); U.S. Department of Energy, Energy Information Administration, *Electric Power Monthly*, [DOE/EIA-0226(2013/05)] (May 2013); Public Service Commission of Wisconsin, unpublished data (2005-2011); telephone survey of wastewater treatment facilities and landfills on biogas production (2007-2010).

ENERGY USE FOR ELECTRIC GENERATION
3.3%
IN 2011

Wisconsin's energy use for electric generation decreased by 3.3 percent in 2011. Since the early 1980s, coal and nuclear power have been dominate fuels for electricity generation.

Coal use decreased 6.4 percent and imports of electricity (and associated losses) from other states and Canada increased 22.5 percent. Petroleum use decreased by 2.4 while natural gas increased by 12.2 percent as utilities switched from coal to natural gas at some power plants.

In 2011, of the electricity produced in Wisconsin, coal provided 61.1 percent of the energy. The proportion of energy provided by petroleum, natural gas, renewables and hydropower was only 9.4 percent, and balance of electricity was nuclear or imports to the state.

Wisconsin Agricultural Energy Use, in Btu, by Type of Fuel

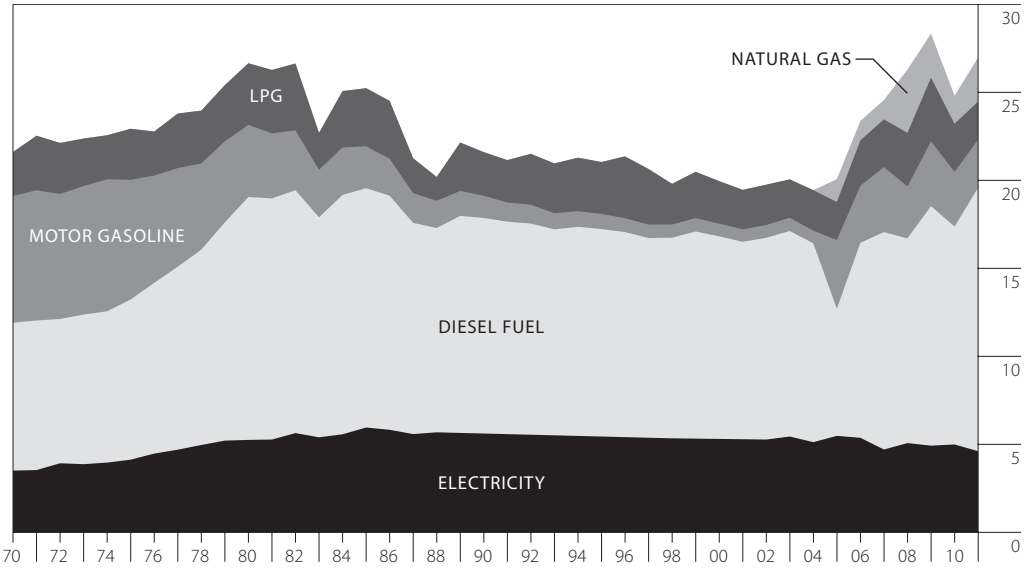
AGRICULTURAL END-USE ENERGY 8.4% IN 2011

Agricultural energy end use increased by 8.4 percent in 2011.

Energy use in this sector is affected by changes in mechanization and automation, and by advances in technology such as biodiesel. Agricultural sector energy use accounted for 2.4 percent of total end use energy in Wisconsin.

2011 reflects the first year that natural gas is reported in the agriculture sector. Natural gas is used primarily for space heating and crop drying, along with liquefied propane gas (LPG).

1970-2011 TRILLIONS OF BTU



1970-2011 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Motor Gasoline	Diesel Fuel[a]	LPG	Other Fuel[b]	Total Petroleum		Electricity		Natural Gas[d]		Total End Use	Total Resource Use[c]
1970	7.2	8.4	2.5		18.1	*83.8%*	3.5	*16.2%*			21.6	28.4
1975	6.8	9.1	2.9		18.8	*82.0%*	4.1	*18.0%*			22.9	31.7
1980	4.1	13.8	3.5		21.4	*80.3%*	5.3	*19.7%*			26.7	37.5
1985	2.4	13.6	3.3		19.3	*76.4%*	6.0	*23.6%*			25.2	37.9
1990	1.3	12.3	2.5		16.0	*74.0%*	5.6	*26.0%*			21.6	35.2
1995	0.9	11.8	3.0		15.6	*74.1%*	5.4	*25.9%*			21.0	34.1
2000	0.7	11.5	2.4		14.7	*73.4%*	5.3	*26.6%*			20.0	32.0
2005[e,r]	3.9	7.2	2.2	0.3	13.6	*66.8%*	5.5	*27.0%*	1.3	*6.2%*	20.3	32.1
2010[r]	3.1	12.4	2.7	0.2	18.4	*73.6%*	5.0	*19.9%*	1.6	*6.5%*	25.1	36.2
2011[p]	**2.7**	**15.0**	**2.2**	**0.2**	**20.1**	***73.9%***	**4.6**	***17.0%***	**2.5**	***9.2%***	**27.2**	**37.0**

a Includes other light distillates, through 2005.

b This fuel is primarily distillate and kerosene, but may include small amounts of coal and wood.

c Includes energy resources (and losses) attributed to electricity generation.

d Natural gas consumption for 2008 reflects the high price of natural gas in that year, as well as the inclusion of nurseries and greenhouses in the sample.

e Starting in 2005, figures in this table reflect a shift from a per acre approach to gathering fuel data to new data resources for petroleum fuels. Previous to 2005, distillate and kerosene data were included in the diesel figure.

p Preliminary estimates.

r Revised.

Source: Wisconsin Department of Administration, Division of Energy, based on U.S. Department of Agriculture, *Energy and U. S. Agriculture: 1974 Data Base* (September 1976), *1978 Census of Agriculture* (1980) and *Farm Production Expenditures* (1980-1984); Wisconsin Department of Agriculture, Trade, and Consumer Protection, *Wisconsin Agricultural Statistics* (1974-2009) and *Wisconsin Dairy Facts* (1982-2006); Wisconsin Department of Revenue fuels sales and tax data (1991-2011); National Agriculture Statistics Service, unpublished expenditure data (2005-2011); United States Department of Agriculture, Economic Research Service data, http://www.ers.usda.gov/data/FarmIncome (2005-2011); Energy Information Administration, petroleum navigator, http://www.eia.gov/petroleum/data.cfm (2005-2011).

Wisconsin Agricultural Energy Use, in Gallons and kWh, by Type of Fuel

1970-2011 MILLIONS OF GALLONS AND MILLIONS OF kWh

Year	Motor Gasoline	Diesel[a]	LPG	Other Fuel[b]	Total Petroleum	Electricity (Millions of kWh)
1970	58.0	60.7	0.1		118.8	1,028
1975	54.3	65.8	0.1		120.2	1,210
1980	33.0	99.3	0.1		132.4	1,539
1985	19.1	97.8	0.1		117.0	1,745
1990	10.1	88.5	0.1		98.7	1,645
1995	6.9	85.0	0.1		92.0	1,595
1996	6.3	84.0	36.8		127.1	1,585
1997	6.1	81.9	33.1		121.1	1,575
1998	6.0	82.2	24.2		112.4	1,565
1999	6.1	83.7	27.6		117.4	1,560
2000	5.8	81.4	25.3		112.5	1,555
2001	5.7	79.5	23.5		108.7	1,550
2002	5.8	82.1	24.0		111.9	1,545
2003[r]	6.0	84.1	22.8		112.9	1,595
2004[r]	5.8	81.2	24.1		111.1	1,501
2005[c,r]	31.2	52.1	22.6	1.9	107.9	1,606
2006[r]	25.9	80.0	27.1	2.2	135.2	1,574
2007[r]	29.6	89.1	28.3	1.9	149.0	1,379
2008	23.6	83.9	31.8	2.0	141.3	1,486
2009[r]	29.5	98.1	37.8	4.8	170.3	1,443
2010[r]	24.8	89.3	28.7	1.7	144.5	1,463
2011[p]	**21.9**	**108.0**	**22.5**	**1.5**	**153.9**	**1,351**

Although farmers use manure digesters and other forms of energy generation such as biomass, and biodiesel to power and heat their farm, their primary energy comes from petroleum sources.

a Fuel oil and kerosene, through 2004.

b This fuel is primarily distillate and kerosene, but may include small amounts of coal and wood.

c The State Energy Office instituted a new method of data collection for fuels used in the agricultural sector. Starting in 2005, agricultural sector data have been revised to reflect the new data collection method. Previous to 2005, kerosene and distillates were included in the diesel figure.

p Preliminary estimates.

r Revised.

Source: Wisconsin Department of Administration, Division of Energy, based on U.S. Department of Agriculture, *Energy and U. S. Agriculture: 1974 Data Base* (September 1976), *1978 Census of Agriculture* (1980) and Farm Production Expenditures (1980-1984); Wisconsin Department of Agriculture, Trade, and Consumer Protection, *Wisconsin Agricultural Statistics* (1974-2009) and *Wisconsin Dairy Facts* (1982-2006); and Wisconsin Department of Revenue, *Motor Vehicle Fuel Tax Statistics* (1991-2011); National Agriculture Statistics Service, unpublished expenditure data (2005-2011); United States Department of Agriculture, Economic Research Service data, http://www.ers.usda.gov/data/FarmIncome (2005-2011); Energy Information Administration, petroleum navigator, http://www.eia.gov/petroleum/data.cfm (2005-2011).

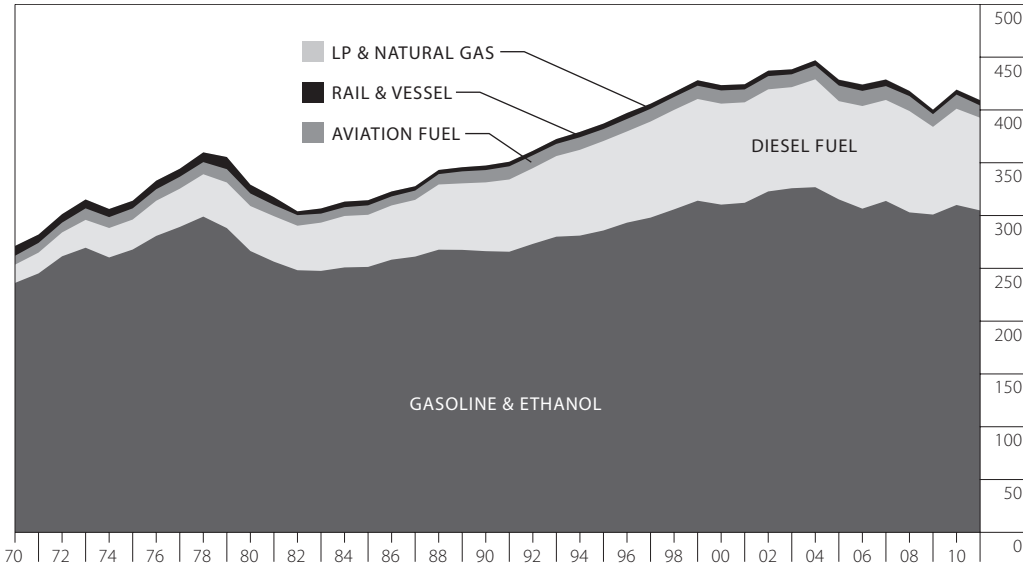
Wisconsin Transportation Energy Use, in Btu, by Type of Fuel

TRANSPORTATION ENERGY USE
2.4%
MOTOR GASOLINE USE
1.0%
ETHANOL USE
11.1%

Transportation energy use decreased 2.4 percent in 2011. Motor gasoline use decreased 1.0 percent, while ethanol use decreased 11.1 percent—the first decrease in ethanol consumption since ethanol was introduced to Wisconsin in 1982. The decrease in consumption is linked to both the decrease in overall gasoline consumption and overall reduced ethanol production related to high feedstock costs.

Diesel fuel is used primarily for trucking freight. Diesel fuel use decreased 3.7 percent. Transportation activities consume 35.6 percent of Wisconsin's total end use energy, accounting for 87.0 percent of petroleum use.

1970-2011 TRILLIONS OF BTU



Year	Motor Gasoline[a]	Ethanol	Diesel Fuel	Aviation Gasoline	Aviation Jet Fuel	Rail Distillate & Residual	LPG	Natural Gas[b]	Total
1970	236.2	0.0	17.3	0.7	7.7	9.3	NA		271.2
1975	267.8	0.0	28.4	0.8	9.8	7.2	NA		314.0
1980	266.4	0.0	42.6	0.9	11.0	8.3	NA		329.2
1985[r]	251.2	0.1	49.3	0.6	8.4	4.8	NA		314.5
1990[r]	265.6	0.7	65.2	0.6	11.0	4.3	NA		347.3
1995[r]	281.8	4.1	84.7	0.7	10.6	5.2	0.6		387.7
2000[r]	302.4	7.9	95.6	0.8	11.7	5.0	0.5		424.0
2005[r]	304.9	10.4	93.1	0.5	14.3	5.5	0.3	0.0238	428.9
2006[r]	295.5	11.0	97.2	0.4	13.9	5.9	0.3	0.0247	424.3
2007[r]	300.2	13.6	95.6	0.4	12.8	6.2	0.2	0.0237	429.0
2008[r]	284.7	18.3	96.0	0.3	13.8	4.8	0.2	0.0199	418.2
2009[r]	281.5	19.4	83.1	0.3	11.8	4.2	0.2	0.0204	400.4
2010[r]	288.4	21.6	91.1	0.3	13.1	4.6	0.2	0.0346	419.4
2011[p]	**285.7**	**19.2**	**87.8**	**0.3**	**11.3**	**5.0**	**0.2**	**0.0630**	**409.4**

a Excludes ethanol.

b Compressed natural gas gasoline gallon equivalents (GGE). Assumes energy content of one standard GGE is 114,818.76 Btus.

p Preliminary estimate.

r Revised.

NA – Not available.

Source: Wisconsin Department of Commerce, Bureau of Petroleum Inspection, *Report on Petroleum Products Inspected and Delivered to Wisconsin* (1970-1995); Wisconsin Department of Revenue, *Motor Vehicle Fuel Tax Statistics* (1970-2011) and *Petroleum Supply Annual*, DOE/EIA-3340 (1982-2011); US Department of Energy, Form EIA-782C, "Monthly Report of Petroleum Products Sold for Consumption" (1983-2011); WI Office of Energy Independence surveys of airport fixed base operators (2007-2009) and railways (2007-2011).

Wisconsin Transportation Energy Use, in Gallons, by Type of Fuel

1970-2011 MILLIONS OF GALLONS

Year	Motor Gasoline[a]	Ethanol	Diesel Fuel	Aviation		Distillate & Residual		LPG	Natural Gas[b]	Total
				Gasoline	Jet Fuel	Rail	Vessel			
1970	1,889.1	0.0	124.8	5.9	56.7	49.2	17.0	NA		2,142.7
1975	2,142.8	0.0	205.1	6.7	72.4	36.6	14.1	NA		2,477.7
1980	2,130.7	0.0	307.1	7.0	81.4	44.8	14.8	NA		2,585.8
1985r	2,009.7	1.5	356.9	4.5	62.2	27.1	7.4	NA		2,469.3
1990r	2,124.5	8.3	471.1	5.0	81.6	29.1	9.0	NA		2,728.6
1995r	2,254.1	48.5	612.5	5.6	78.6	35.1	6.9	6.1		3,047.3
1996r	2,307.8	56.8	624.6	5.7	82.0	38.4	3.7	6.0		3,125.0
1997r	2,345.4	57.5	657.6	5.8	84.0	34.1	0.0	5.8		3,190.3
1998r	2,398.4	71.5	681.0	5.9	85.0	31.9	0.5	5.7		3,280.0
1999r	2,461.5	75.4	696.3	6.1	87.4	37.0	0.0	5.1		3,368.8
2000r	2,419.4	93.8	691.2	6.0	87.0	35.9	0.0	5.3		3,338.6
2001r	2,438.6	85.9	687.7	5.9	85.0	35.2	0.0	4.6		3,342.9
2002r	2,523.0	88.2	698.9	4.9	88.2	36.9	0.0	4.0		3,444.1
2003r	2,538.7	100.9	692.1	4.3	86.1	33.7	0.0	3.8		3,459.6
2004r	2,545.6	102.5	738.5	4.2	92.5	35.7	0.0	3.7		3,522.7
2005r	2,439.2	123.0	672.7	4.1	105.7	35.1	0.0	3.0	0.208	3,383.0
2006r	2,364.1	130.4	702.6	3.5	102.9	37.2	0.0	3.2	0.215	3,344.2
2007r	2,401.7	161.2	691.3	2.8	94.6	43.2	0.0	2.3	0.207	3,397.4
2008r	2,277.3	217.0	693.9	2.6	102.4	34.7	0.0	2.4	0.174	3,330.5
2009r	2,252.3	229.7	600.4	2.4	87.0	30.1	0.0	2.2	0.178	3,204.3
2010r	2,307.6	255.4	658.8	2.4	97.0	33.3	0.0	2.3	0.302	3,357.0
2011p	**2,285.5**	**227.1**	**634.6**	**2.4**	**83.7**	**35.8**	**0.0**	**1.6**	**0.549**	**3,271.2**

a Excludes ethanol. See adjacent column for amounts of ethanol.

b Compressed natural gas gasoline gallon equivalents (GGE). Assumes that the energy content of one standard GGE is 114,818.76 Btus.

p Preliminary estimate.

r Revised.

NA – Not available.

Source: Wisconsin Department of Commerce, Bureau of Petroleum Inspection, *Report on Petroleum Products Inspected and Delivered to Wisconsin* (1970-1995); Wisconsin Department of Revenue, *Motor Vehicle Fuel Tax Statistics* (1970-2011) and *Petroleum Supply Annual*, DOE/EIA-3340 (1982-2011); US Department of Energy, Form EIA-782C, "Monthly Report of Petroleum Products Sold Into States for Consumption" (1983-2011); WI Office of Energy Independence surveys of airport fixed base operators (2000-2009) and railways (2000-2011).

AVERAGE PRICE OF GASOLINE $.738 PER GALLON

In 2011, the average statewide price of gasoline increased by $.738 a gallon, to $3.529/gallon.

Ethanol, a renewable energy resource primarily distilled from corn, is used as an oxygenate in reformulated gasoline and in the blending of E10 (10 percent ethanol, 90 percent gasoline) and E85 (85 percent ethanol, 15 percent gasoline). Wisconsin is seeing a growing use of compressed natural gas (CNG) as a transportation fuel. CNG can be produced from fossil fuel sources, or from biological sources as BioCNG. CNG and BioCNG are measured in gasoline gallon equivalents (GGE), and are available from a variety of fueling stations across the state. See http://www.stateenergyoffice.wi.gov for more information on natural gas as a transportation fuel.